

FIG. 1

2006T20" 031903

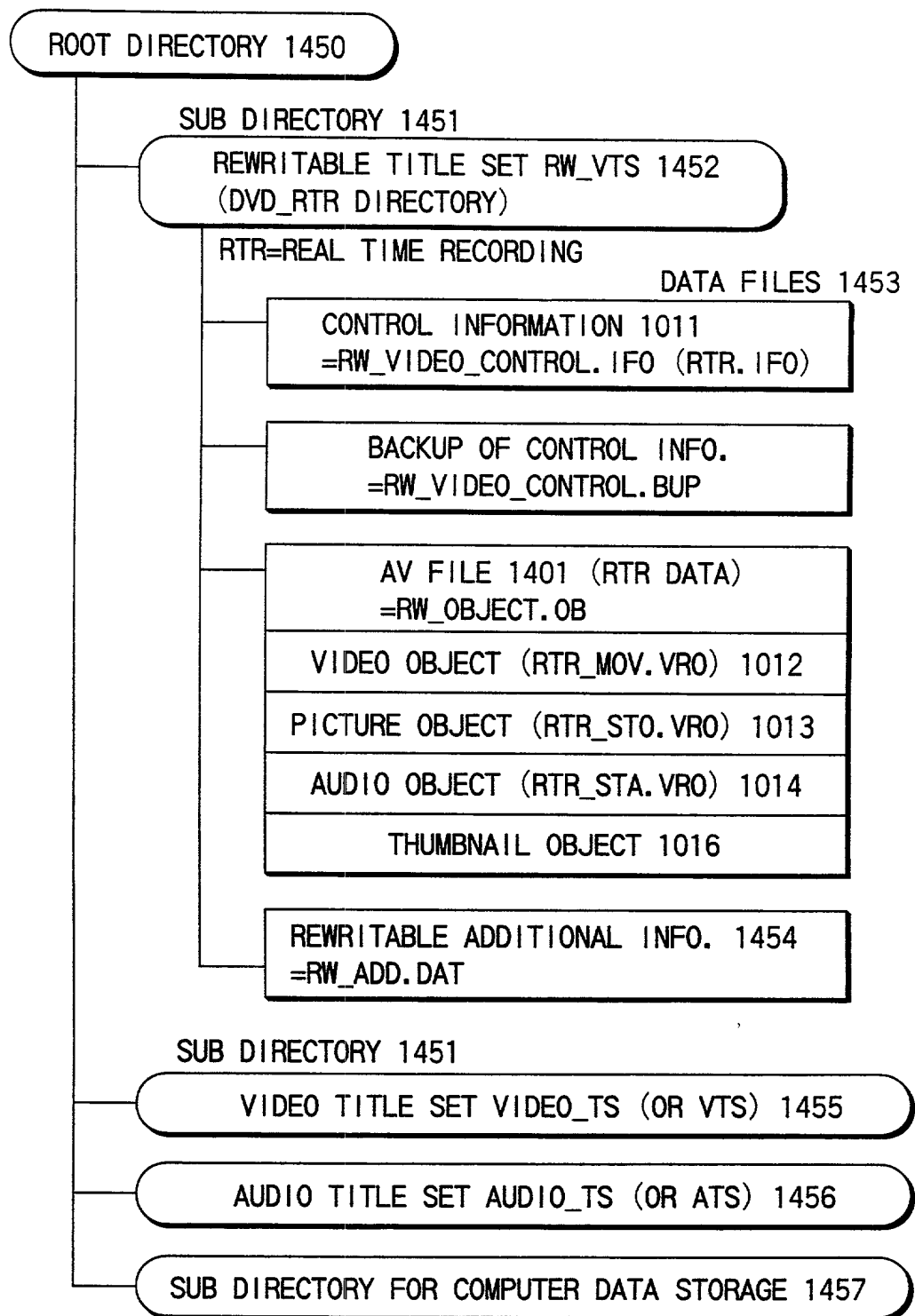
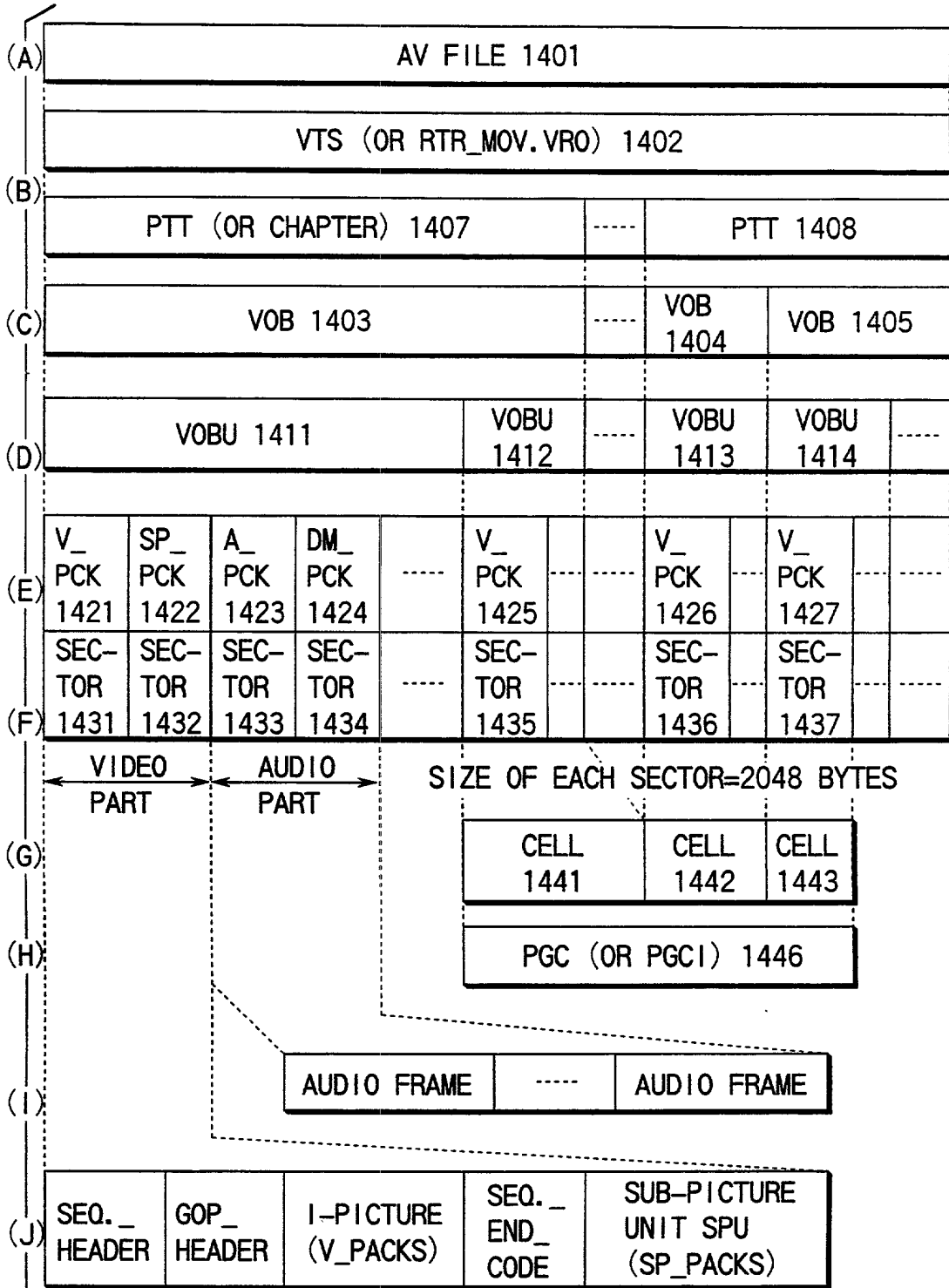


FIG. 2



←SMALLER LOGICAL SECTOR NUMBER (LSN)  
←INNER SIDE OF OPTICAL DISC 1001

**FIG. 4**

CONTENTS OF  
ALLOCATION  
MAP TABLE  
1105

DISTRIBUTION  
INFORMATION OF  
POSITIONS OF  
UNRECORDED  
AREA 1621

DISTRIBUTION  
INFORMATION OF  
POSITIONS OF  
RECORDED DATA  
AS TO VOB #1  
1622

DISTRIBUTION  
INFORMATION OF  
POSITIONS OF  
RECORDED DATA  
AS TO VOB #2  
1623

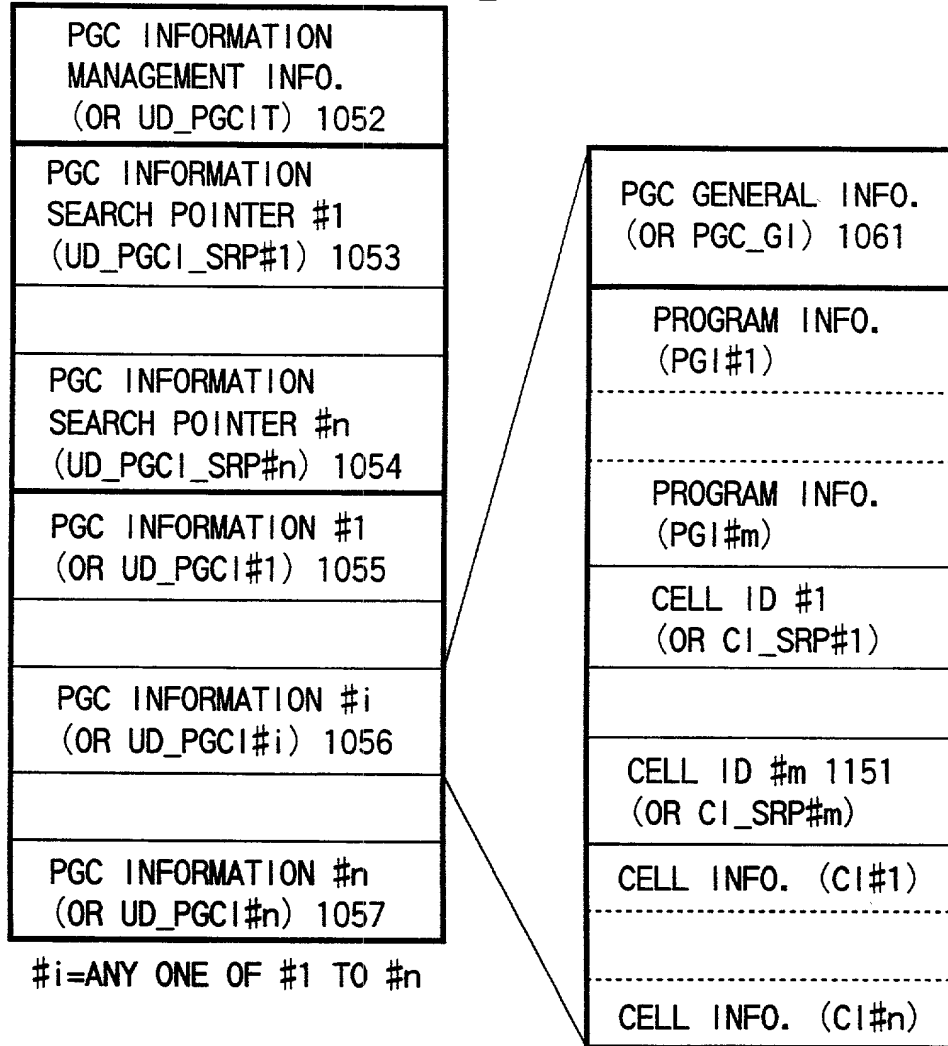
DISTRIBUTION  
INFORMATION OF  
POSITIONS OF  
RECORDED DATA  
AS TO VOB #3  
1624

NUMBER OF EXTENTS IN UNRECORDED AREA 1601	1
1ST ADR. (LSN) OF 1ST EXTENT IN UNRECORDED AREA 1606	e-a
SIZE (SECTORS) OF 1ST EXTENT IN UNRECORDED AREA 1614	f-e
NUMBER OF EXTENTS IN VOB #1 1602	1
1ST ADR. (LSN) OF 1ST EXTENT IN VOB #1 1607	b-a
SIZE (SECTORS) OF 1ST EXTENT IN VOB #1 1615	c-b
NUMBER OF EXTENTS IN VOB #2 1603	1
1ST ADR. (LSN) OF 1ST EXTENT IN VOB #2 1608	d-a
SIZE (SECTORS) OF 1ST EXTENT IN VOB #2 1616	e-d
NUMBER OF EXTENTS IN VOB #3 1604	3
1ST ADR. (LSN) OF 1ST EXTENT IN VOB #3 1609	1
SIZE (SECTORS) OF 1ST EXTENT IN VOB #3 1617	b-a
1ST ADR. (LSN) OF 2ND EXTENT IN VOB #3 1610	c-a
SIZE (SECTORS) OF 2ND EXTENT IN VOB #3 1618	d-c
1ST ADR. (LSN) OF 3RD EXTENT IN VOB #3 1611	f-a
SIZE (SECTORS) OF 3RD EXTENT IN VOB #3 1619	g-f

FIG. 5

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PGC CONTROL INFO. (OR UD\_PGCIT) 1103



- \*1> PGC INFORMATION (OR UD\_PGC\_I) CAN DEFINE  
A GROUP OF ONE OR MORE PROGRAMS;
- \*2> EACH PROGRAM CAN BE FORMED OF ONE OR MORE CELLS;
- \*3> EACH CELL CAN BE SPECIFIED BY CELL ID (OR CI\_SRP);
- \*4> EACH CELL ID (OR CI\_SRP) CAN INDICATE POSITION  
(OR START ADDRESS) OF CELL INFORMATION (OR CI);
- \*5> EACH CELL INFORMATION (OR CI) CAN DETERMINE  
START TIME AND END TIME OF PRESENTATION OF CELL

FIG. 6

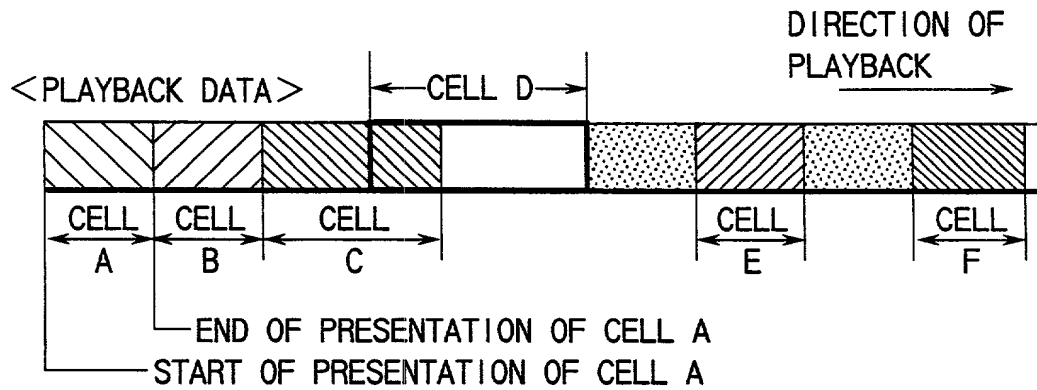


FIG. 7A

PGC INFORMATION (PGCI)

PGC#1 1081		PGC#2 1082		PGC#3 1083	
NUMBER OF CELLS=3		NUMBER OF CELLS=3		NUMBER OF CELLS=5	
#1	CELL A	#1	CELL D	#1	CELL E
#2	CELL B	#2	CELL E	#2	CELL A
#3	CELL C	#3	CELL F	#3	CELL D
—	—	—	—	#4	CELL B
—	—	—	—	#5	CELL E
CELL ID	CELL INFO.	CELL ID	CELL INFO.	CELL ID	CELL INFO.
CI_SRP #m=3	CI #n=3	CI_SRP #m=3	CI #n=3	CI_SRP #m = 5	CI #n=4

FIG. 7B

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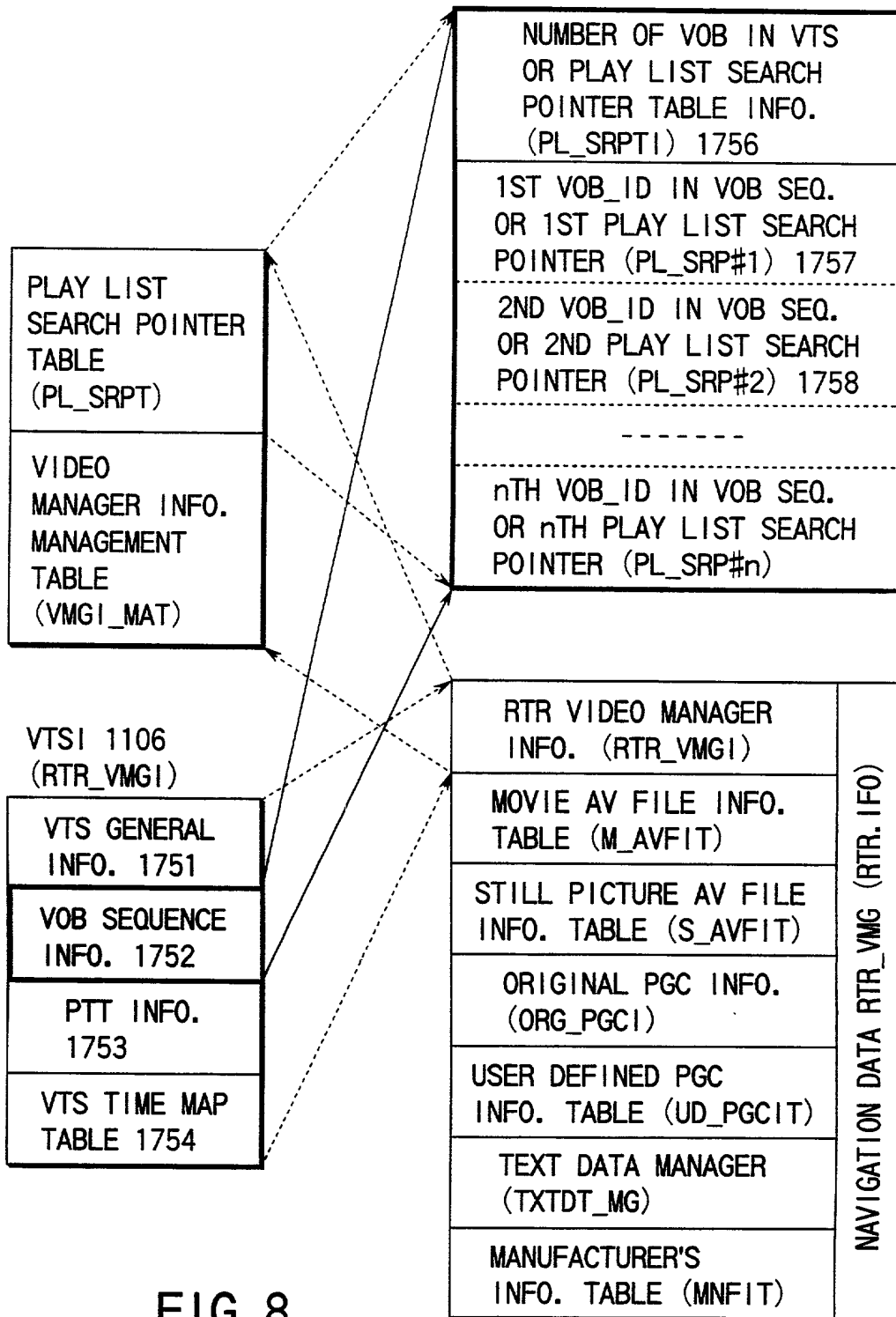


FIG.8



FIG. 9A

AV FILE 1401
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FIG. 9B

VTS (OR RTR_MOV.VR0) 1402
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FIG. 9C

VOB#1 1461	VOB#2 1462	VOB#3 1763	UNRECORDED AREA 1460
EXTENT# $\alpha$ 1471	EXTENT# $\beta$ 1472	EXTENT# $\gamma$ 1473	EXTENT# $\delta$ 1474
		EXTENT# $\epsilon$ 1475	EXTENT# $\zeta$ 1470

FIG. 9D

AV FILE 1401
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FIG. 9E

VTS (OR RTR_MOV.VR0/RTR_STO.VR0/RTR_STA.VR0) 1402
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M_VOB1#		S_VOB1#				
VOB#A 1771	VOB#B 1772	VOB#C 1773	VOB#D 1774	VOB#E 1775	VOB#F 1776	VOB#G 1777
VIDEO OBJECTS 1012	AUDIO OBJECTS 1014	PICTURE OBJECTS 1013	AUDIO OBJECTS 1014	THUMBNAIL OBJECTS 1016		
RTR_MOV.VR0	RTR_STA.VR0	RTR_STO.VR0	RTR_STA.VR0			

FIG. 9F

FIG. 10A

VOB FOR PICTURE OBJECTS (OR STILL PICTURE VOB GROUP RELATING TO S_VOGL#) 1631
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FIG. 10B

VOBU (FOR ONE STILL PICTURE) 1641
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FIG. 10C

V_PCK 1661	V_PCK 1662	V_PCK 1663	SP_PCK 1681	A_PCK 1691	A_PCK 1692
I-PICTURE 1706		DUMMY DATA		SP_STREAM	A_STREAM

← VIDEO PART → → AUDIO PART →

FIG. 10D

VOB FOR PICTURE OBJECTS (OR STILL PICTURE VOB GROUP RELATING TO S_VOGL#) 1632
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FIG. 10E

VOBU(ONE STILL PICT.) 1642	VOBU 1643	.....	VOBU 1644
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FIG. 10F

V_PCK 1664	.....	SP_PCK 1682	A_PCK 1693	V_PCK 1665	.....	A_PCK 1694	V_PCK 1666	.....	V_PCK 1667	.....	A_PCK 1695
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FIG. 10G

VOB FOR PICTURE OBJECTS (OR STILL PICTURE VOB GROUP RELATING TO S_VOI#) 1633	
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FIG. 10H

VOBU (ONE STILL PICTURE) 1645	
VOBU 1646	
-----	
VOBU 1647	

FIG. 10I

V_PCK 1668	V_PCK 1669	V_PCK 1670	SP_PCK 1683	V_PCK 1671	V_PCK 1672	V_PCK 1673	-----	V_PCK 1674	-----
I-PICTURE 1707		DUMMY 1704	SP- STREAM	I-PICTURE 1708		DUMMY 1705	-----	I-PICTURE 1709	
VIDEO PART				VIDEO PART				VIDEO PART	

FIG. 10J

VOB FOR PICTURE OBJECTS (OR STILL PICTURE VOB GROUP RELATING TO S_VOI#) 1634	
--	--

FIG. 10K

VOBU (ONE STILL PICTURE) 1648	
VOBU 1649	
-----	
VOBU 1650	

FIG. 10L

SP_PCK 1684	A_PCK 1696	A_PCK 1697	A_PCK 1698	A_PCK 1699	A_PCK 1700	A_PCK 1701	-----	A_PCK 1702	-----
AUDIO PART				AUDIO PART				AUDIO PART	

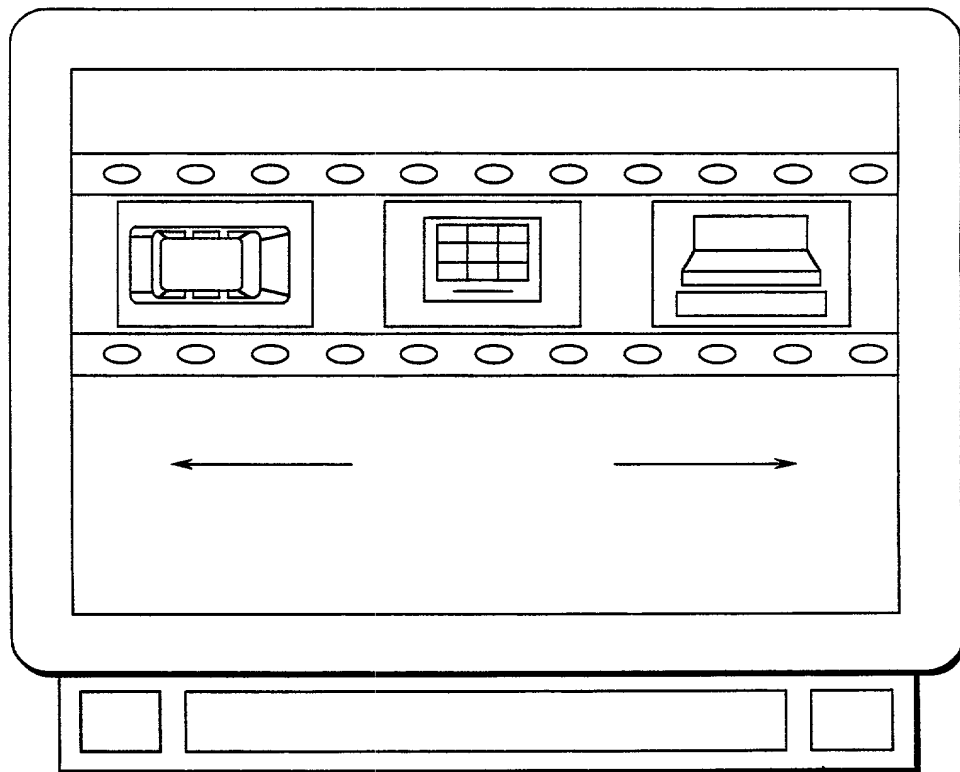
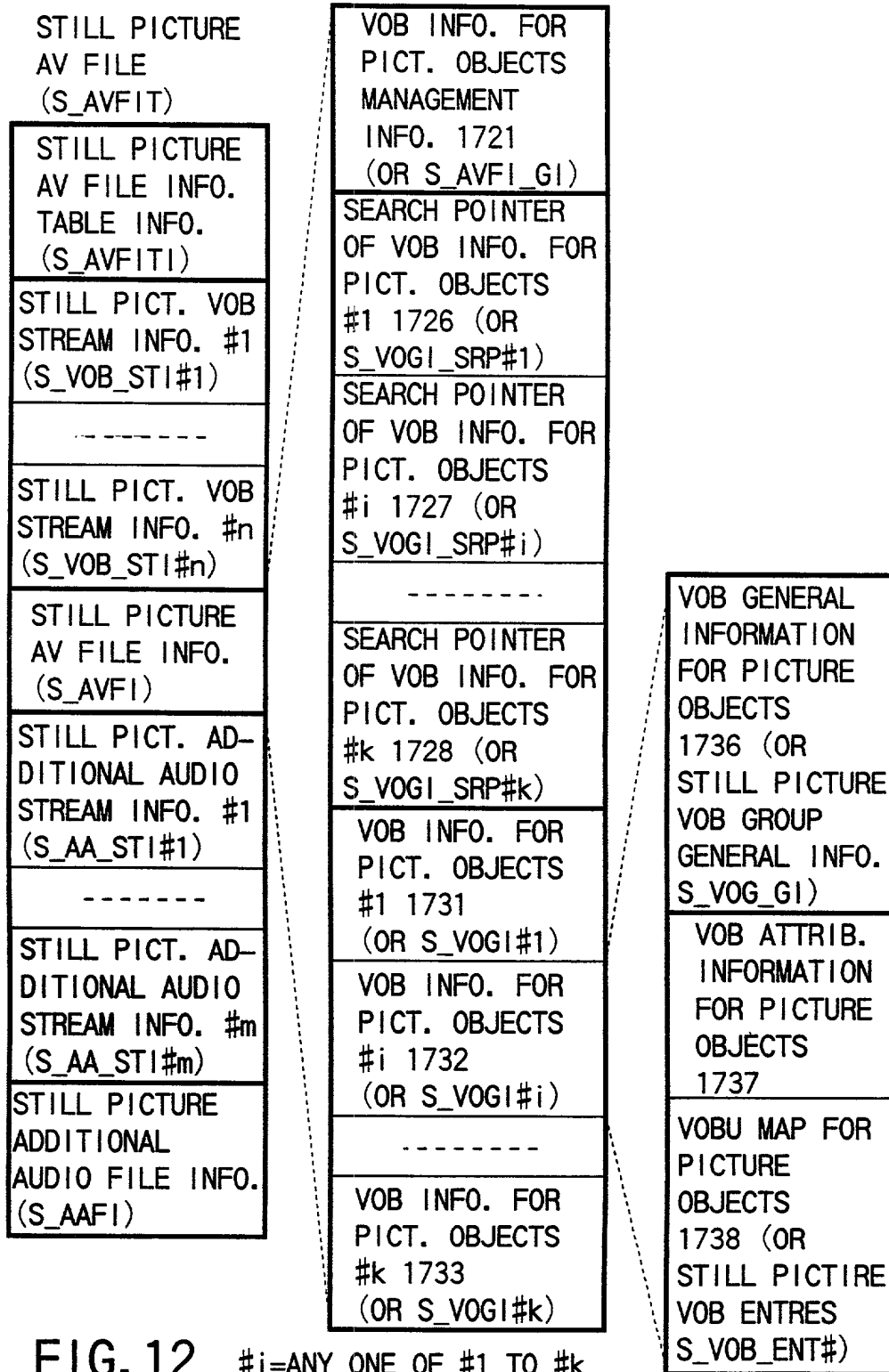


FIG. 11

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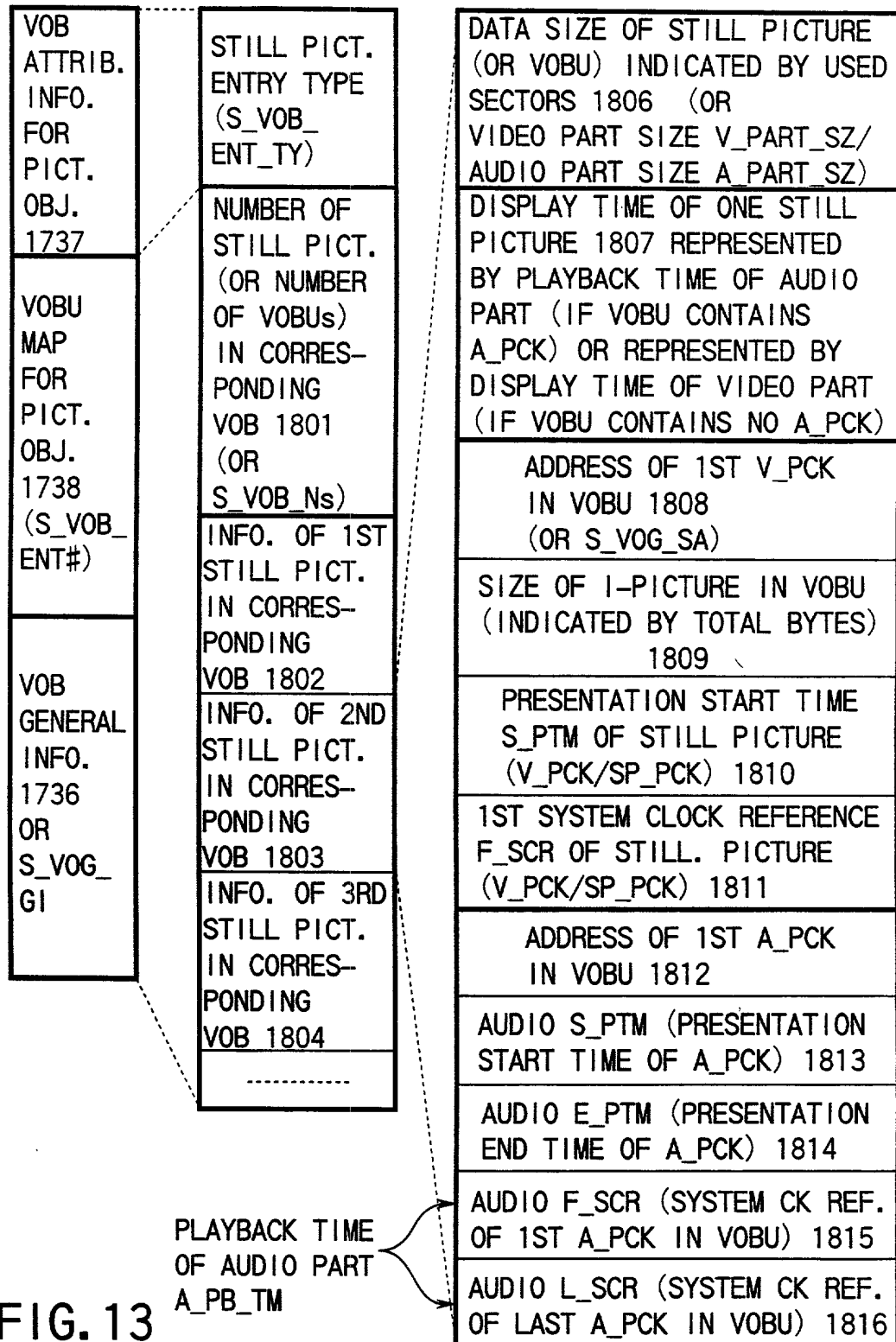


FIG. 13

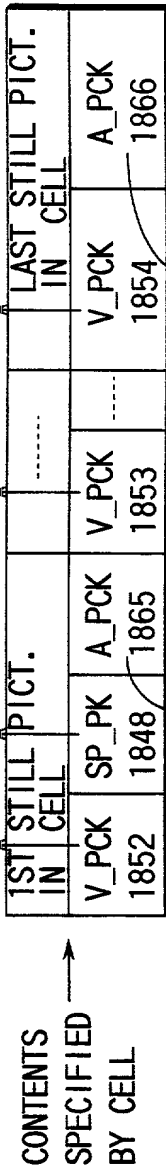
206T20" SEE 9/00T

FIG. 14A

VOB #A 1821			
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VOBU 1825	VOBU 1826	-----	VOBU 1827	-----
STILL PICT. NO. 1	STILL PICT. NO. 2	-----	STILL PICT. NO. h	-----

STLPCT 1831	AUDIO 1841	STLPCT 1832	AUDIO 1842	STLPCT 1833	AUDIO 1843
V_PCK 1851	A_PCK 1861	V_PCK 1852	SP_PK 1848	V_PCK 1853	A_PCK 1863



-----	A_PCK 1864	V_PCK 1855	A_PCK 1865	V_PCK 1856	V_PCK 1857	A_PCK 1866	V_PCK 1858	-----
-----	AUDIO 1844	STLPCT 1835	AUDIO 1845	STLPCT 1836	STLPCT 1837	AUDIO 1846	STLPCT 1838	-----

-----	STILL PICTURE NO. j	-----	STILL PICTURE NO. h+j-2	-----
-----	VOBU 1828	-----	VOBU 1829	-----

FIG. 14G

VOB #B 1822			
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CONTENTS (S_CI) OF CELL PLAYBACK INFO. (CI) FOR PICTURE OBJECTS 1870	EXAMPLE 1871 WITH RESPECT TO FIG.14	EXAMPLE 1872 WITH RESPECT TO FIG.14
CELL ID (CI_SRP) 1873	_____	_____
TYPE INFORMATION OF CELL (C_TY) 1880	_____	_____
ID INFORMATION OF VOB WITH V_PCK 1874	VOB #A	1821
STILL PICT. NUMBER 1875 IN VOB INCLUDING V_PCK OF 1ST STILL PICTURE IN CELL (S_S_VOB_ENTN)	2	1826
STILL PICT. NUMBER 1876 IN VOB INCLUDING V_PCK OF LAST STILL PICTURE IN CELL (E_S_VOB_ENTN)	h	1827
ID INFORMATION OF VOB WITH A_PCK 1877	VOB #B	1822
STILL PICT. NUMBER 1878 IN VOB INCLUDING A_PCK OF 1ST STILL PICTURE IN CELL	j	1828
PRESENTATION TIME 1879 OF EACH STILL PICTURE HAVING NO CORRESPONDING A_PCK	2 SECONDS (ONE LINE)	_____

FIG.15

206120"SEEZ001



CONTENTS OF CELL PLAYBACK INFO. (CI) FOR PTT
CELL ID (CI_SRP) 1883
TYPE INFO. OF CELL (C_TY) 1882
ID INFO. OF PTT WITH V_PCK 1884
STILL PICTURE NUMBER 1885 IN PTT OF VOB INCLUDING V_PCK OF 1ST STILL PICTURE IN CELL
STILL PICTURE NUMBER 1886 IN PTT OF VOB INCLUDING V_PCK OF LAST STILL PICTURE IN CELL
ID INFO. OF PTT WITH A_PCK 1887
STILL PICTURE NUMBER 1888 IN PTT OF VOB INCLUDING A_PCK OF 1ST STILL PICTURE IN CELL
PRESENTATION TIME 1889 OF EACH STILL PICT. HAVING NO CORRESPONDING A_PCK

FIG. 16

STILL PICTURE AV FILE INFO.  
(S\_AVFI) FOR PTT (CHAPTER)

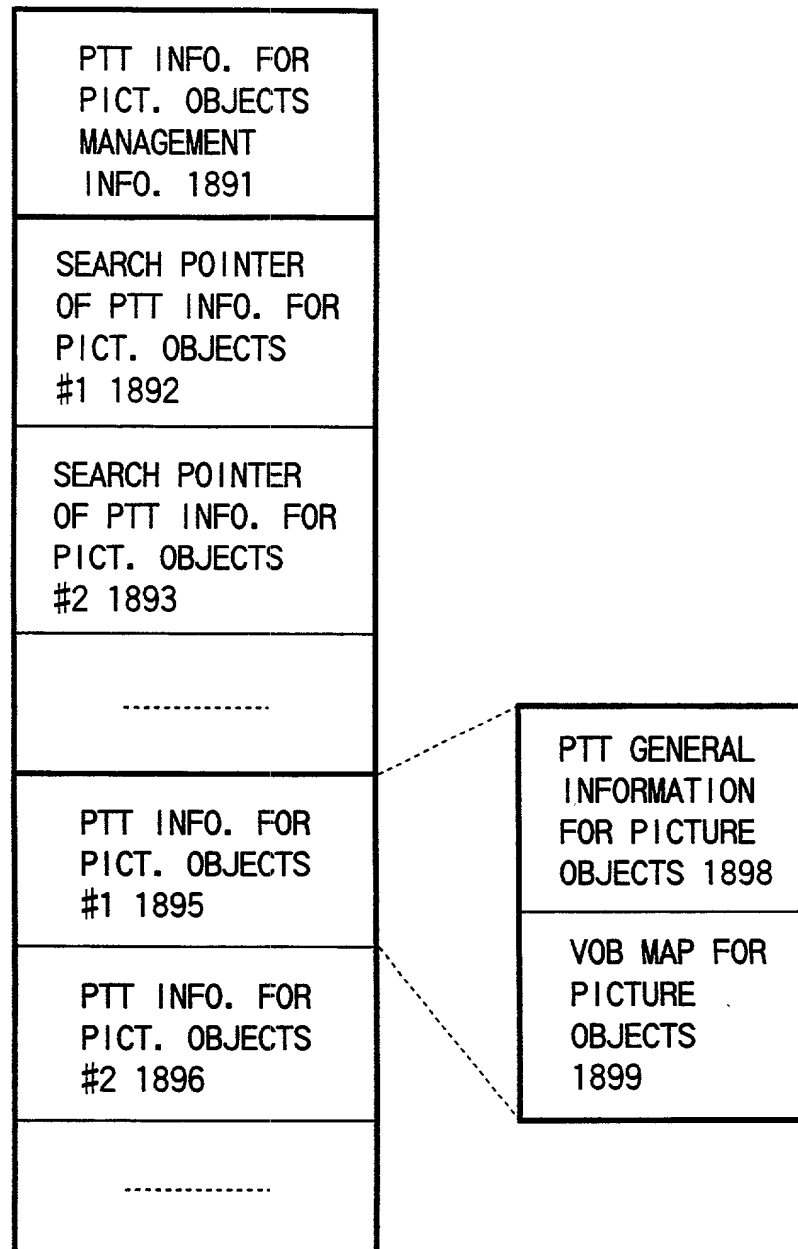


FIG. 17

20076335-03400

VOB MAP FOR  
PICT. OBJECTS  
1899

NUMBER OF STILL PICT. (OR NUMBER OF VOBs) IN CORRESPONDING PTT 1901 (OR S_VOB_Ns)
INFO. OF 1ST STILL PICT. IN CORRESPONDING PTT 1902
INFO. OF 2ND STILL PICT. IN CORRESPONDING PTT 1903
-----

DATA SIZE OF STILL PICTURE (OR VOB) INDICATED BY USED SECTORS 1906
DISPLAY TIME OF ONE STILL PICTURE 1907 REPRESENTED BY PLAYBACK TIME OF AUDIO PART (IF VOB CONTAINS A_PCK) OR REPRESENTED BY DISPLAY TIME OF VIDEO PART (IF VOB CONTAINS NO A_PCK)
ADDRESS OF 1ST V_PCK IN VOB 1908 (OR S_VOB_SA)
SIZE OF I-PICTURE IN VOB (INDICATED BY TOTAL BYTES) 1909
PRESENTATION START TIME S_PTM OF STILL PICTURE (V_PCK/SP_PCK) 1910
1ST SYSTEM CLOCK REFERENCE F_SCR OF STILL. PICTURE (V_PCK/SP_PCK) 1911
ADDRESS OF 1ST A_PCK IN VOB 1912
AUDIO S_PTM (PRESENTATION START TIME OF A_PCK) 1913
AUDIO E_PTM (PRESENTATION END TIME OF A_PCK) 1914
AUDIO F_SCR (SYSTEM CK REF. OF 1ST A_PCK IN VOB) 1915
AUDIO L_SCR (SYSTEM CK REF. OF LAST A_PCK IN VOB) 1916

FIG. 18

206T20" SEE 2001

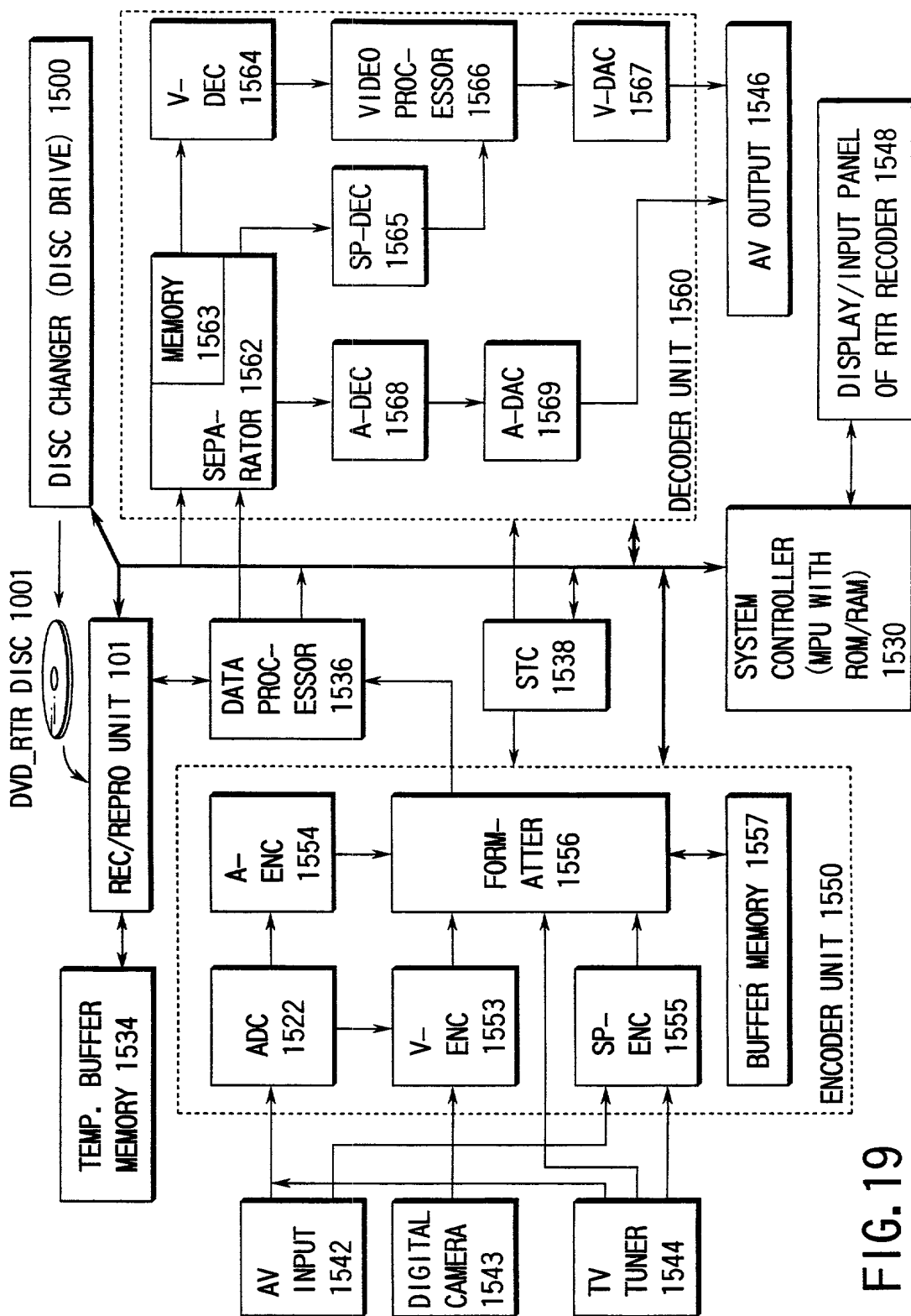


FIG. 19

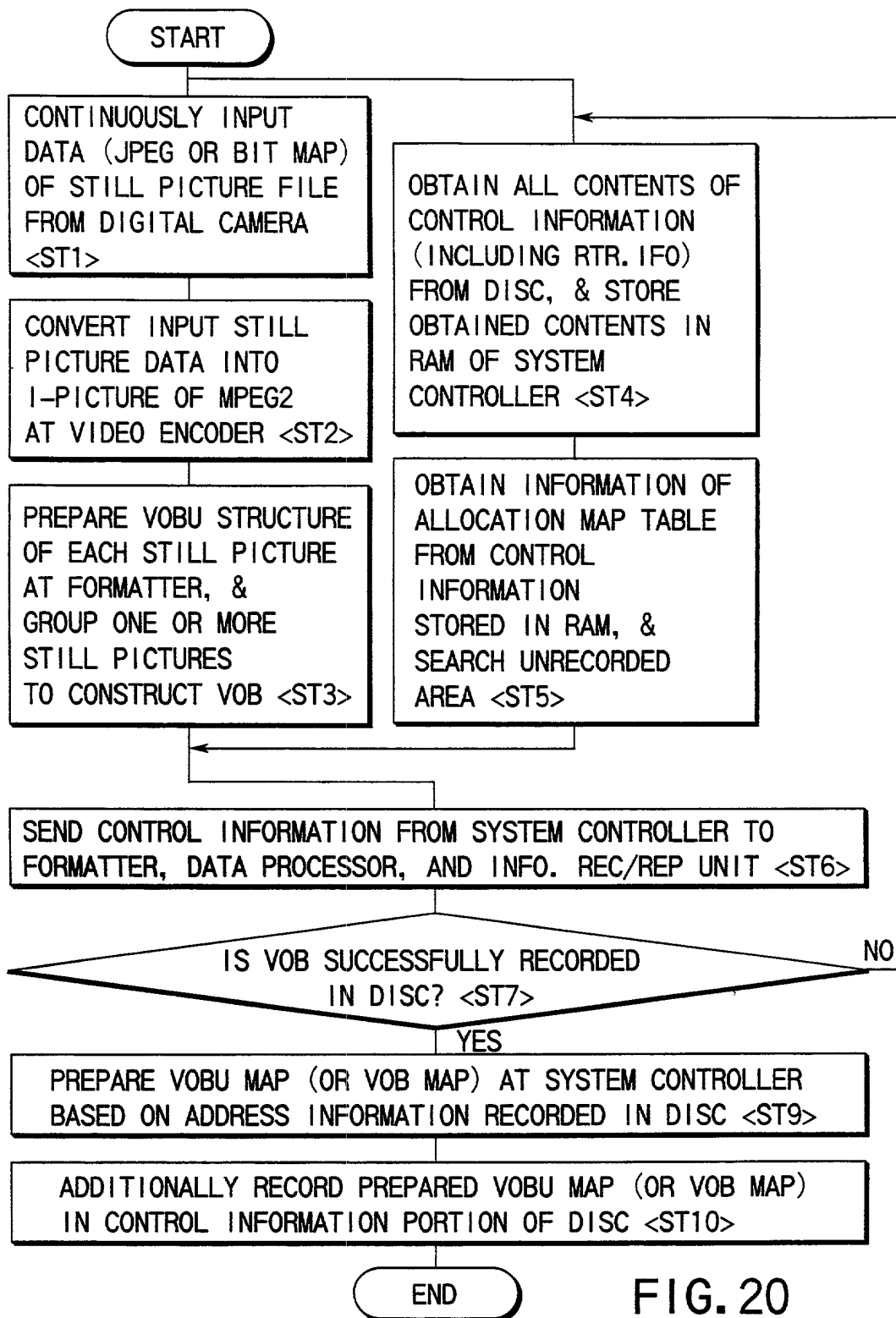


FIG. 20

START

OBTAIN ALL CONTENTS OF CONTROL INFORMATION (RTR. IFO) FROM DISC, & STORE OBTAINED CONTENTS IN RAM OF SYSTEM CONTROLLER <ST11>

OBTAIN PLAYBACK CONTROL INFO. FROM CONTROL INFO. STORED IN RAM, & INTERPRETE OBTAINED INFORMATION AS TO MANNER OF REPRODUCTION <ST12>

SEARCH PROGRAM TO BE REPRODUCED BASED ON PGC CONTROL INFO. IN RAM, OBTAIN CELL(S) IN PGC INFORMATION OF SEARCHED PROGRAM, & OBTAIN VOB\_ID OR PTT\_ID SPECIFIED BY CORRESPONDING CELL FROM CELL PLAYBACK INFORMATION STORED IN RAM <ST13>

OBTAIN DISC ADDRESS OF VOB TO BE REPRODUCED BASED ON VOB INFORMATION OR PTT INFORMATION STORD IN RAM <ST14>

ACCESS VOB RECORDED IN DISC BASED ON CONTROL SIGNAL FROM SYSTEM CONTROLLER TO REPRODUCE INFORMATION OF VOB, & PROVIDE REPRODUCED INFORMATION AS AV OUTPUT FOR DISPLAY <ST18>

RECEIVE ADDITIONAL INFO. INPUT BY USER WHILE DISPLAYING AV OUTPUT, & GROUP ONE OR MORE STILL PICTURES AT FORMATTER BASED ON USER-INPUT INFORMATION TO PREPARE VOB OR PTT <ST19>

RECORD INFORMATION OF VOB PREPARED BY FORMATTER <ST20>

END

FIG. 21

20070303 000000

START

OBTAIN ALL CONTENTS OF CONTROL INFORMATION (RTR. IFO) FROM DISC, & STORE OBTAINED CONTENTS IN RAM OF SYSTEM CONTROLLER <ST11>

OBTAIN PLAYBACK CONTROL INFO. FROM CONTROL INFO. STORED IN RAM, & INTERPRETE OBTAINED INFORMATION AS TO MANNER OF REPRODUCTION <ST12>

SEARCH PROGRAM TO BE REPRODUCED BASED ON PGC CONTROL INFO. IN RAM, OBTAIN CELL(S) IN PGC INFORMATION OF SEARCHED PROGRAM, & OBTAIN VOB\_ID OR PTT\_ID SPECIFIED BY CORRESPONDING CELL FROM CELL PLAYBACK INFORMATION STORED IN RAM <ST13>

OBTAIN DISC ADDRESS OF VOB TO BE REPRODUCED BASED ON VOB INFORMATION OR PTT INFORMATION STORD IN RAM <ST14>

ACCESS VOB RECORDED IN DISC BASED ON CONTROL SIGNAL FROM SYSTEM CONTROLLER TO REPRODUCE INFORMATION OF VOB, & PROVIDE REPRODUCED INFORMATION AS AV OUTPUT FOR DISPLAY <ST18>

ACCESS VOB #A RECORDED IN DISC TO PROVIDE STILL PICTURE INFORMATION OF VOB #A <ST16>

ACCESS VOB #B IN DISC TO REPRODUCE AUDIO INFORMATION OF VOB #B, & PROVIDE AUDIO INFO. OF VOB #B AND STILL PICTURE INFO. OF VOB #A AS AV OUTPUT FOR STILL PICTURE DISPLAY WITH SOUND <ST17>

END

FIG. 22

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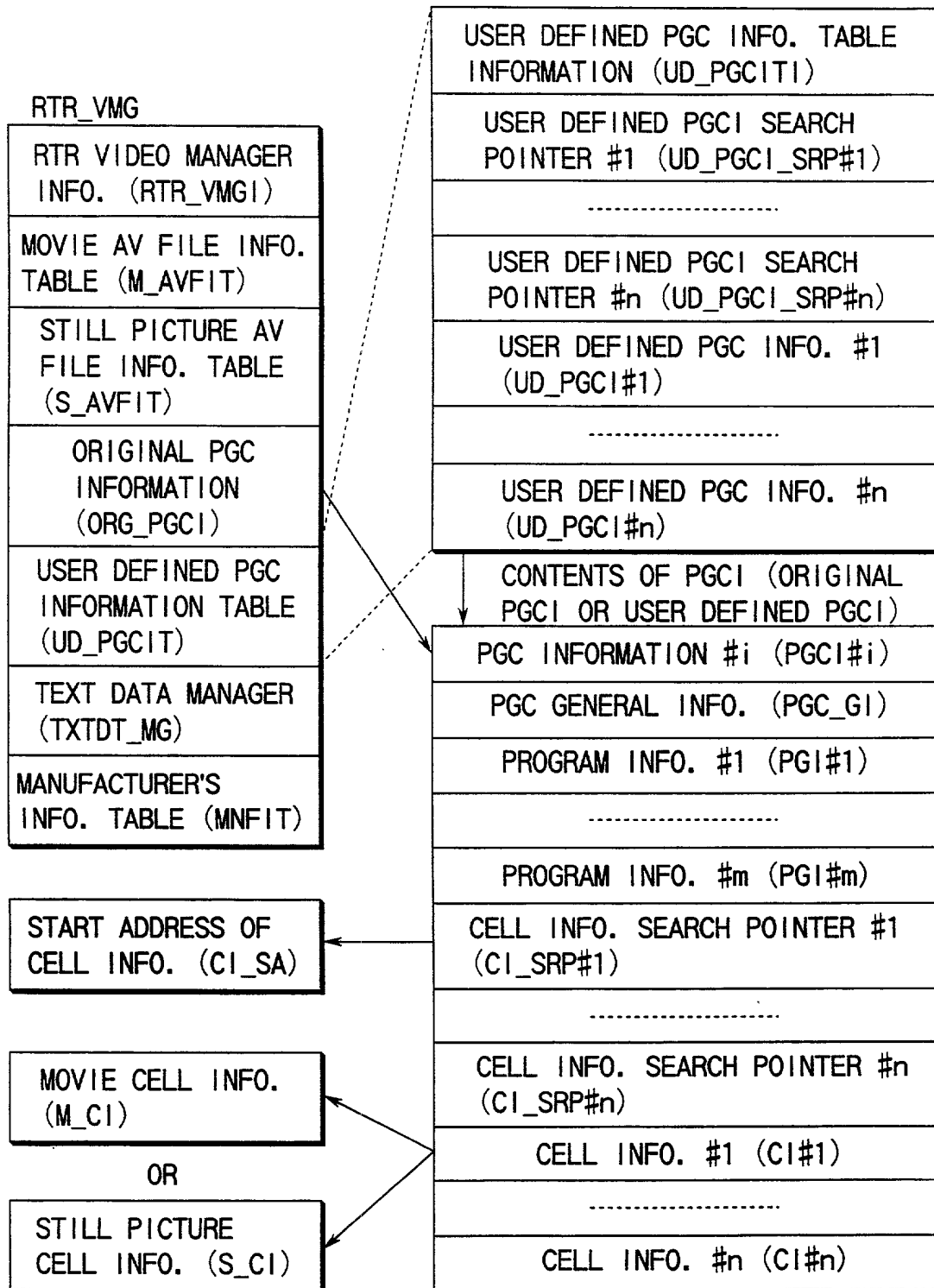


FIG. 23



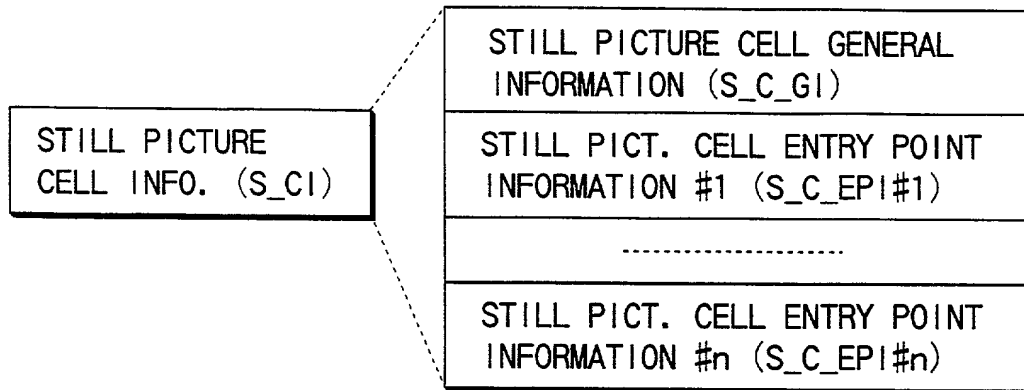


FIG. 24

CONTENTS OF S\_C\_GI

FIELD NAME	CONTENTS
RESERVED	RESERVED
C_TY	CELL TYPE
S_VOGL_SRPN	S_VOGL SEARCH POINTER NUMBER
C_EPI_Ns	NUMBER OF CELL ENTRY POINT INFO.
S_S_VOB_ENTN	START S_VOB_ENT NUMBER
E_S_VOB_ENTN	END S_VOB_ENT NUMBER

FIG. 25

CONTENTS OF S\_C\_EPI

FIELD NAME	CONTENTS
EP_TY	ENTRY POINT TYPE
S_VOB_ENTN	S_VOB_ENT NUMBER
PRM_TXTI	PRIMARY TEXT INFORMATION

FIG. 26

206120 92892001

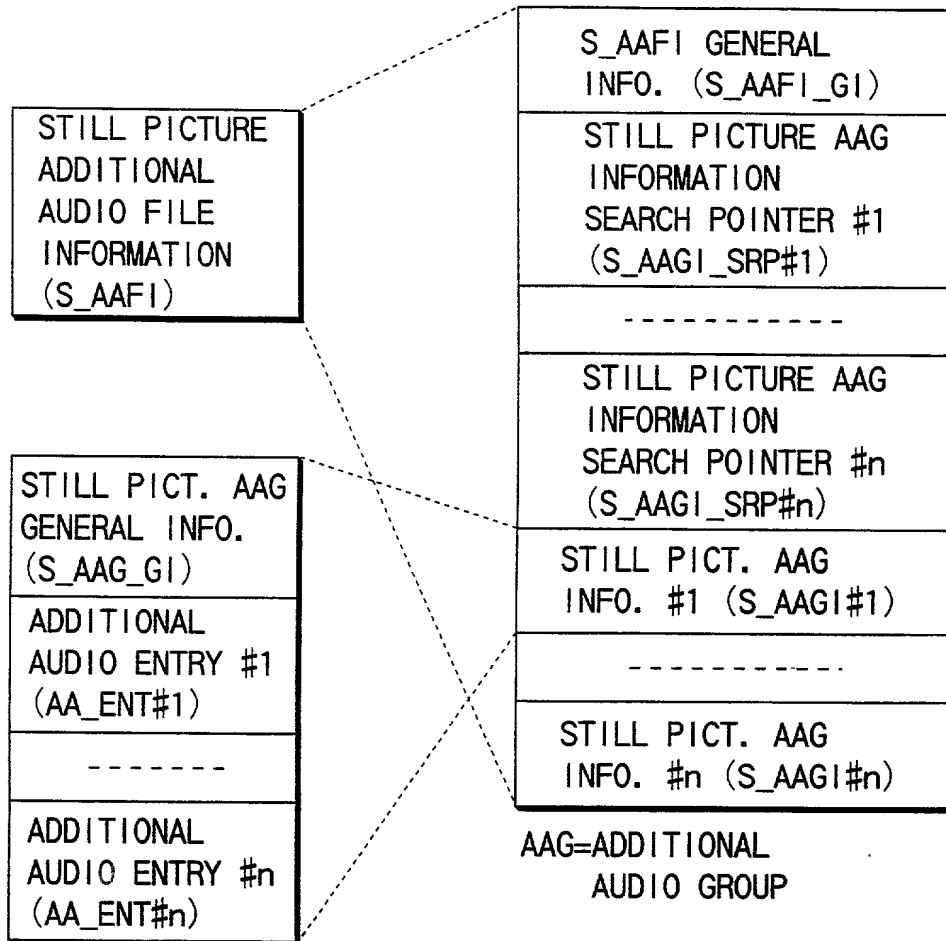


FIG. 27

CONTENTS OF S\_AAG\_GI

FIELD NAME	CONTENTS
AA_ENT_Ns	NUMBER OF AA_ENT
S_AA_STIN	STILL PICTURE ADDITIONAL AUDIO STREAM INFORMATION NUMBER
S_AAG_SA	START ADDRESS OF THIS AAG IN STILL PICTURE ADDITIONAL AUDIO FILE

FIG. 28

CONTENTS OF AA\_ENT

FIELD NAME	CONTENTS
AA_TY	ADDITIONAL AUDIO TYPE
AA_SZ	SIZE OF ADDITIONAL AUDIO STREAM
AA_PB_TM	PLAYBACK TIME OF ADDITIONAL AUDIO STREAM (MEASURED BY VIDEO FIELDS)

FIG. 29

CONTENTS OF S\_VOG\_GI

FIELD NAME	CONTENTS
S_VOB_Ns	NUMBER OF S_VOBS
S_VOB_STIN	STILL PICTURE VOB STREAM INFORMATION NUMBER
FIRST_VOB_REC_TM	TIME WHEN THE FIRST VOB IN THIS VOB GROUP WAS RECORDED
LAST_VOB_REC_TM	TIME WHEN THE LAST VOB IN THIS VOB GROUP WAS RECORDED
S_VOG_SA	START ADDRESS OF THIS VOB GROUP IN STILL PICTURE AV FILE

FIG. 30

CONTENTS OF S\_VOB\_ENT (TYPE 1)

FIELD NAME	CONTENTS
S_VOB_ENT_TY	STILL PICTURE VOB ENTRY TYPE
V_PART_SZ	SIZE OF VIDEO PART

FIG. 31

206T20:566200T

CONTENTS OF S\_VOB\_ENT (TYPE 2)

FIELD NAME	CONTENTS
S_VOB_ENT_TY	STILL PICTURE VOB ENTRY TYPE
V_PART_SZ	SIZE OF VIDEO PART
A_PART_SZ	SIZE OF ORIGINAL AUDIO PART
A_PB_TM	PLAYBACK TIME OF AUDIO PART (DESCRIBED IN VIDEO FIELDS)

FIG. 32

CONTENTS OF S\_VOB\_ENT (TYPE 3)

FIELD NAME	CONTENTS
S_VOB_ENT_TY	STILL PICTURE VOB ENTRY TYPE
V_PART_SZ	SIZE OF VIDEO PART
S_AAGN	ADDITIONAL AUDIO GROUP NUMBER
AA_ENTN	AA_ENT NUMBER

FIG. 33

CONTENTS OF S\_VOB\_ENT (TYPE 4)

FIELD NAME	CONTENTS
S_VOB_ENT_TY	STILL PICTURE VOB ENTRY TYPE
V_PART_SZ	SIZE OF VIDEO PART
A_PART_SZ	SIZE OF ORIGINAL AUDIO PART
A_PB_TM	PLAYBACK TIME OF AUDIO PART
S_AAGN	ADDITIONAL AUDIO GROUP NUMBER
AA_ENTN	AA_ENT NUMBER

FIG. 34

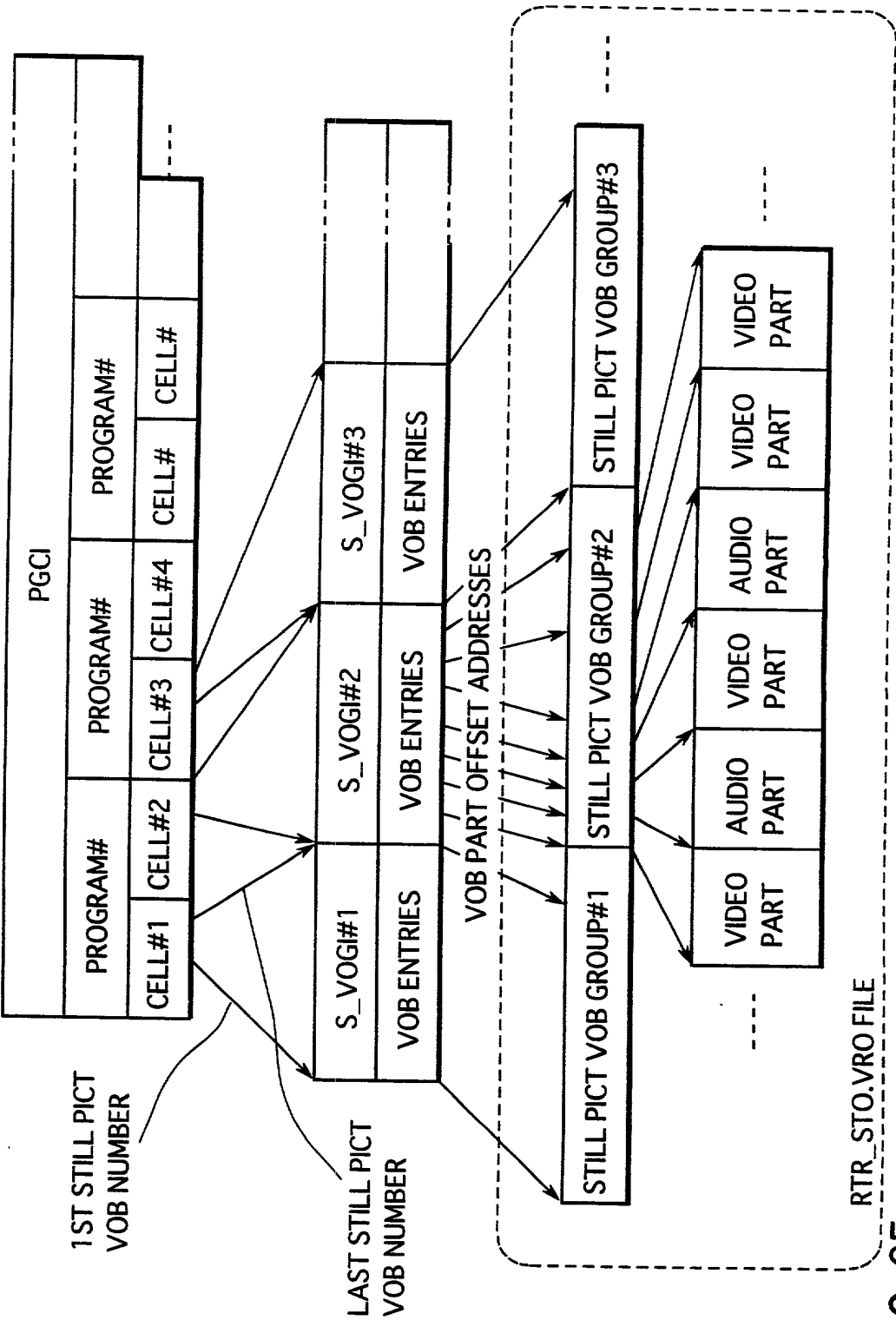


FIG. 35

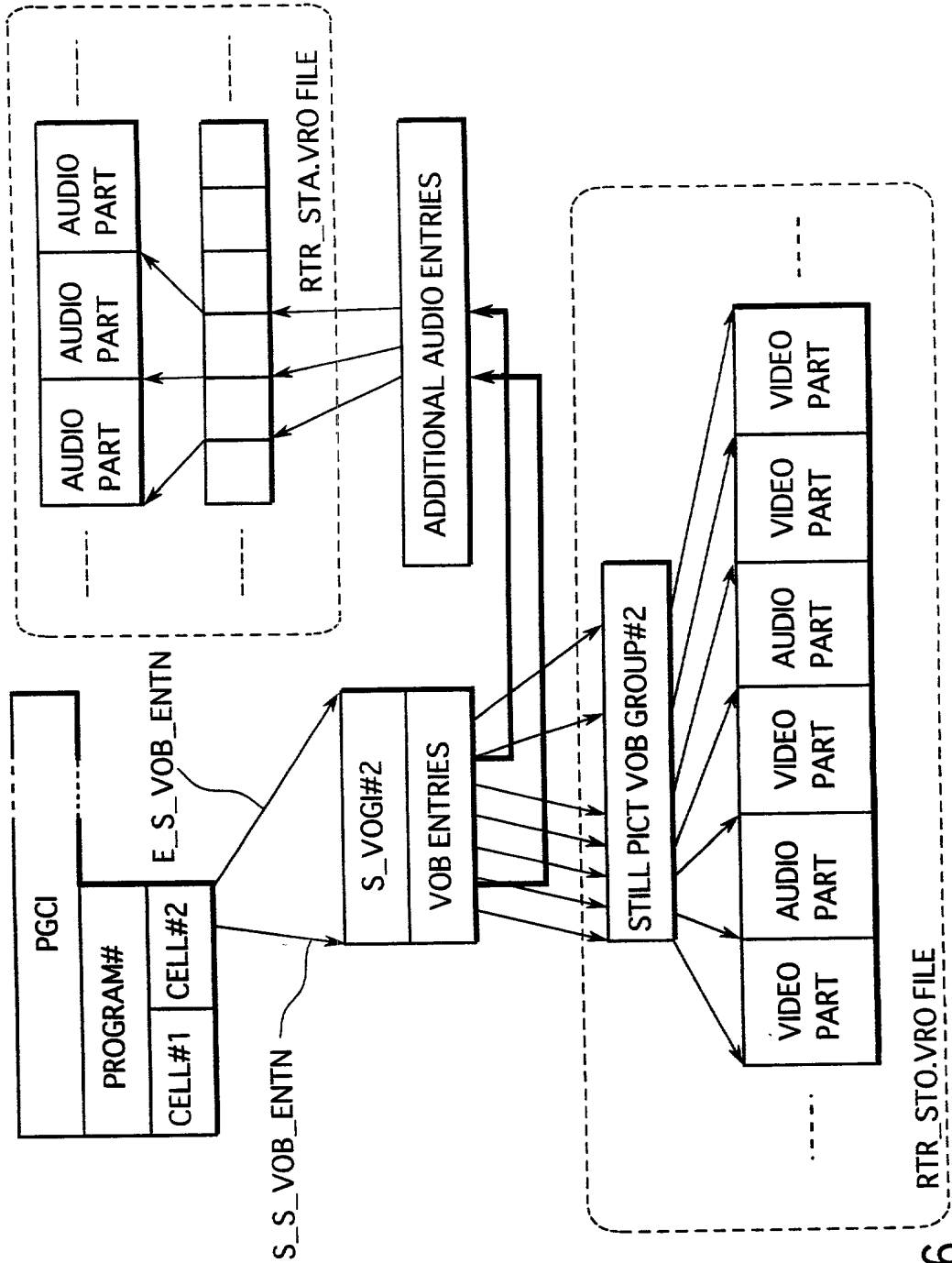


FIG. 36

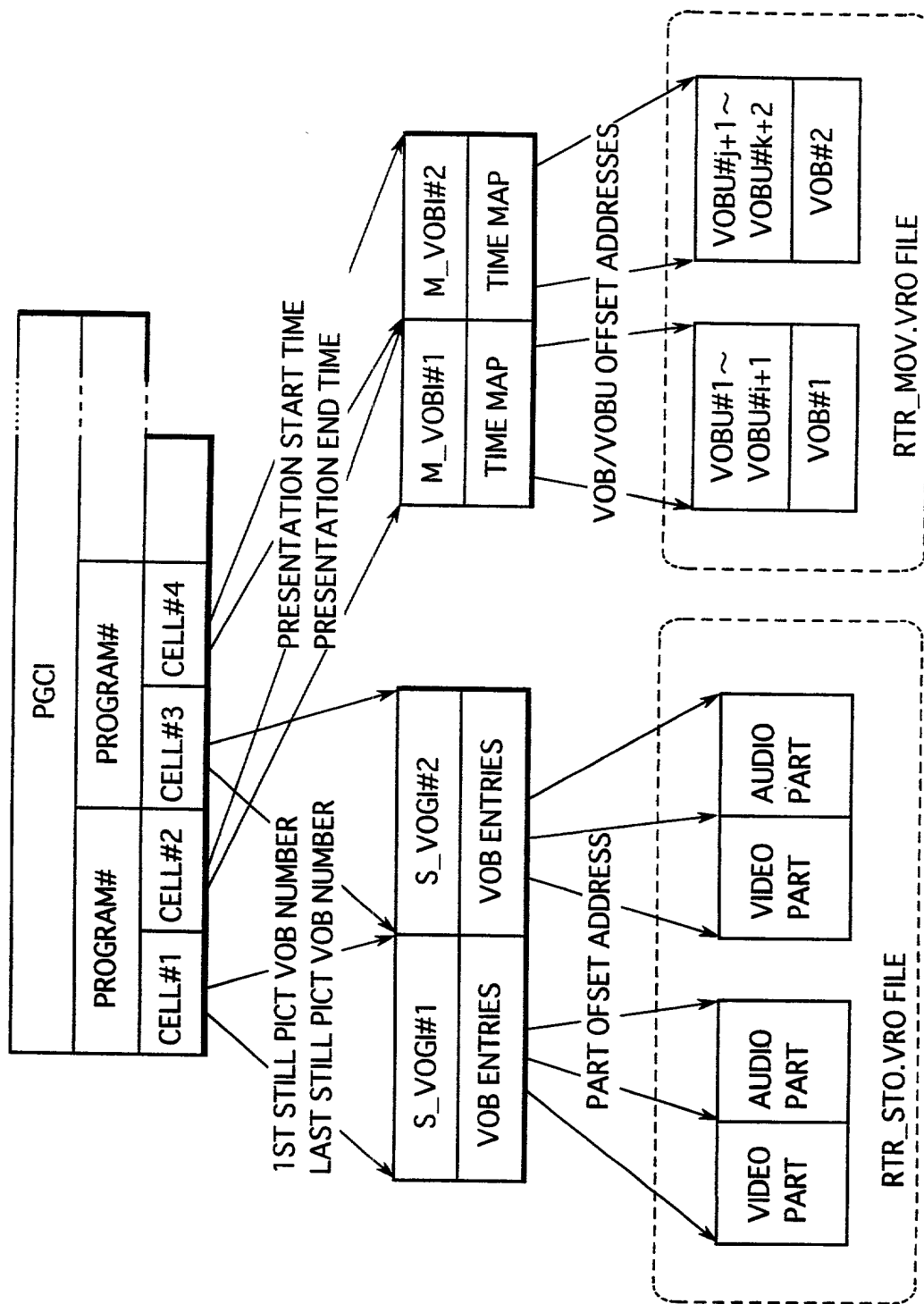


FIG. 37

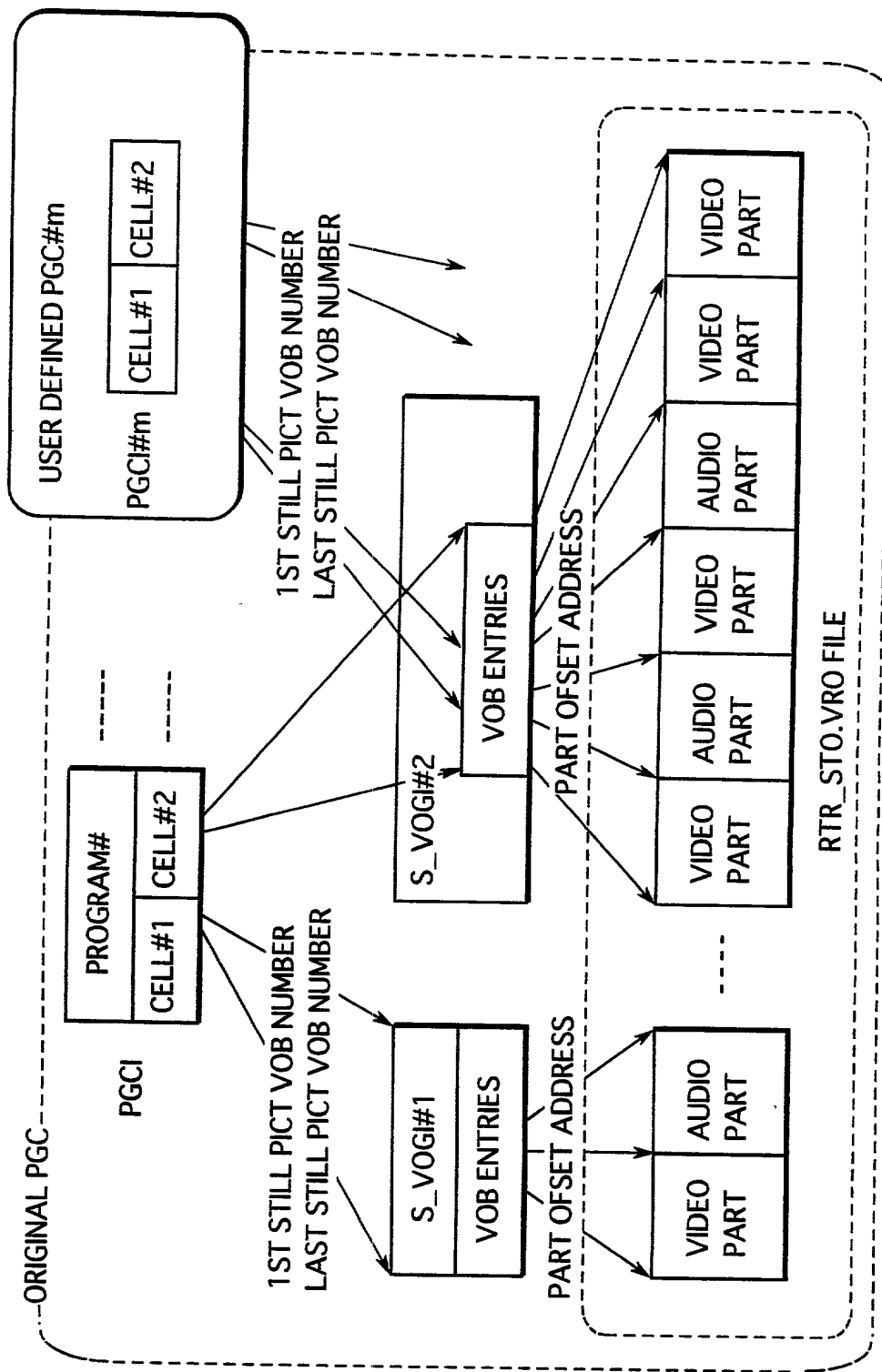


FIG. 38